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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,543	10/06/1999	ALEXANDR ALEXANDROVICH MIROSHIN	8472-018	4468

7590

08/13/2002

PENNIE & EDMONDS  
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WASHINGTON, DC 20006

EXAMINER

HON, SOW FUN

ART UNIT

PAPER NUMBER

1772

DATE MAILED: 08/13/2002

17

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-17

# Office Action Summary

Application No.

09/367,543

Applicant(s)

MIROSHIN ET AL.

Examiner

Sow-Fun Hon

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 97-163 is/are pending in the application.
- 4a) Of the above claim(s) 103-134 and 136-163 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 97-102 and 135 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of claims 97-102 and species 1: organic salts of a dichroic anionic dye of general formula {chromogen}-(XO<sup>-</sup>M<sup>+</sup>)<sub>n</sub> in Paper No. 16 is acknowledged. The traversal is on the ground(s) that

a. The application is not a PCT application but a continuation of it. This is not found persuasive because the application was filed under the provisions of 35 U.S.C. 371 as a national stage application so that lack of unity of invention rules apply to it, in lieu of U.S. restriction practice. The Markush species lack of unity is a subset of the general category of species lack of unity.

b. Each of the claims do relate to a single inventive concept because US 5,739,296 and US 5,712,024 do not disclose the features of the concept of a birefringent anisotropically absorbing layer with at least one refraction index that grows as the polarizable light wavelength increases at least at a certain range of the wavelength. This is not found persuasive because the concept is obvious over the two references cited above as demonstrated in the rejection below.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 97-102, 135 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

c. In independent claim 97:

i. It is unclear what components the polarizer is made up of, and what function the birefringent layer has to contribute to the polarizing function of the polarizer.

ii. It is also unclear what is meant by "birefringent layer". Does it mean that the layer is just birefringent?

iii. It is also unclear what is meant by "absorbing". Does it mean that it absorbs certain wavelengths of light?

iv. It is also unclear what is meant by "refraction index". Does it mean "refractive index"?

v. It is also unclear what is meant by "a certain range of the wavelength". Does it actually mean "a certain range of the spectrum of wavelengths"?

d. In claim 98, it is unclear what is meant by the term "fragments of an unspecified shape". Does it mean that there are components which cannot be specified or defined? What are they?

e. In claim 102, it is unclear what is meant by "the polarizer as the substrate" when it is the polarizer which is being claimed, and which is supposedly composed of different components such as the birefringent layer.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

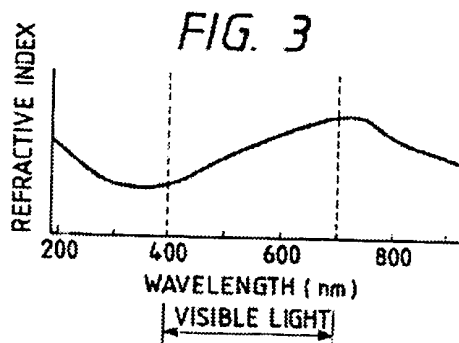
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 97-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gvon et al. (US 5,739,296) in view of Okuzaki et al. (US 5,712,024).

Gvon et al. teaches a polarizer comprising a birefringent layer of a polarizing coating on a birefringent polymeric film substrate. The polarizing coating contains an organic salt of a dichroic anionic dye of general formula  $\{\text{Chromogen}\}-(\text{XO}^-\text{M}^+)_n$  (dichroic plurality of supramolecular complexes formed from one or more of the organic dyestuffs of the formula:  $(\text{SO}_3\text{M})_n$  wherein M is  $\text{M}^+$  (cation) so that  $\text{SO}_3^-$  has to be the counter anion  $\text{XO}^-$ ) (column 5, lines 45-68 and column 15, lines 1-68). Gvon et al. teaches that the polarizing coating can be applied on a reflecting layer (surface). The polarizing coating has an aligning (orientating) influence on the liquid crystal layer, which allows omitting an additional alignment (orienting) layer used with conventional polarizers (column 9, lines 35-45) but does not rule out the additional alignment layer since it is used with conventional polarizers. The dye is inherently anisotropically absorbing since it is dichroic and has a polarization axis (column 9, lines 20-68) which demonstrates anisotropic absorbance, and has color (column 15, lines 1-30) which demonstrates selective absorbance in the visible electromagnetic spectrum in order to have an absorption peak in there.

Gvon et al. however fails to specifically disclose that the anisotropically absorbing birefringent layer has at least one refraction index that increases as the polarizable light wavelength increases at least at a certain range of the wavelength spectrum.

Okuzaki et al. teaches that a dye (coloring matter) having anisotropic absorbance (an absorption peak) in the desired wavelength region must be contained in the film in order to have the desired refractive index dispersion shown below where it can be seen that the refractive index does grow as the wavelength increases at least at a certain range of the wavelength spectrum, from 400 to 700 nm in the example (column 4, lines 1-5).



Because Okuzaki et al. teaches that when dye having anisotropic absorbance is contained in the film, the refractive index grows as the wavelength increases at least at a certain range of the wavelength spectrum, so that it would have been obvious to one of ordinary skill in the art to have determined that the polarizable dye coating of Gvon et al. has at least one refractive index which grows as the polarizable light wavelength increases at least at a certain range of the wavelength spectrum.

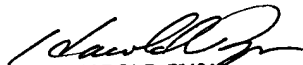
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Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

SH  
08/08/02

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

8/9/02